REMARKS/ARGUMENTS

Upon entry of the present amendment, claims 1, 2, 4-8, 10, 11, and 13-19 remain pending in this application. Applicants respectfully submit that that no new matter has been added by the present amendment. Claims 1, 2, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being anticipated by U.S. Patent No. 6,167,517 ("Gilchrist") in view of U.S. Patent No. 6,202,151 ("Musgrave") and in further view of U.S. Patent No. 6,076,167 ("Borza"). Claims 4-6, 8, 10-13, 17, and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gilchrist in view of Musgrave and in further view of Borza as applied to claims 1, 2, 7, and 9 above, in view of U.S. Patent No. 6,310,966 ("Dulude") and further in view of U.S. Patent No. 5,280,527 ("Gullman"). Claims 14-16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gilchrist in view of Musgrave and in further view of Borza in view of Dulude and further in view of Gullman as applied to claims 4-6, 8, 10-13, 17, and 20 above and further in view of U.S. Patent No. 6,092,201 ("Turnbull"). Applicant respectfully requests reconsideration of the present application in light of the below recited remarks.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 7, and 9

Claims 1, 2, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being anticipated by Gilchrist in view of Musgrave and in further view of Borza. Applicant respectfully disagrees.

Independent claim 1 includes a feature neither taught nor suggested by the prior art, namely "a security module to decrypt the signed biometric data and to use the signature corresponding to the sensor to ***authenticate the sensor*** by determining whether the sensor is an authorized sensor."

The present invention is directed to systems and methods for securely transmitting and authenticating biometric data over a network. In an embodiment of the invention, a biometric sample is collected at a sensor and sent from the sensor to an authentication server so that a biometric template may be generated from the biometric sample at the authentication server. To ensure the authenticity of the imaging device, the biometric sample is signed with a signature of the sensor prior to being transmitted to the server. Also, to ensure that the signed biometric sample is not corrupted in transit to the server, the signed biometric data is also encrypted with a server public key. ***Thus, the present invention provides a dual protection and authentication system. Specifically, in addition to protecting both the biometric sample and the signature during transmission, the present invention also uses the protected signature to authenticate the sensor.***

By contrast, Gilchrist discloses systems and methods for trusted biometric authentication. Gilchrist discloses that:

> "[a] host system receives an identifier for the user from a client system. This identifier is used to retrieve a template containing biometric data associated with a user, and this template is returned to the client. The client then gathers a biometric sample from the user, and compares this biometric sample with the template to produce a comparison result. Next, the client computes a message digest using the template, the comparison result and an encryption key, and sends the message digest to the host system. This computation takes places within a secure hardware module

> within the client computing system that contains a secure encryption key in order to guard against malicious users on the client system. Next, the host system receives the message digest and authenticates the user by determining whether the message digest was computed using the template, the encryption key, and a comparison result indicating a successful match between the biometric sample and the template (Gilchrist, Col. 2, lines 27-45)."

Thus, Gilchrist discloses authenticating a user with a biometric sample. Gilchrist does not teach or suggest authenticating a sensor or any other type of electronic device.

Musgrave discloses creating a digital signature with a private key (Col. 2, ln. 23-25). Musgrave specifically notes that the digital signature is used to ***protect*** the security of the signed data during transmission over a network (Col. 2, ln. 25-28). However, Musgrave does not teach or suggest using a digital signature to ***authenticate*** a sensor or any other type of electronic device. As previously noted by the Examiner, Musgrave mentions that private keys "are not limited to actual human individuals"(Col. 2, line 46). However, this statement does not in any way teach or suggest authentication of a device. Rather, it merely notes that keys used ***for data protection*** may correspond to entities other than human individuals. Indeed, since the private key signature disclosed by Musgrave is not itself encrypted, it is not protected and is subject to corruption. Therefore, the private key signature disclosed by Musgrave could not possibly provide an effective means to authenticate a device.

Borza discloses encrypting data using a server public key (Col. 5, ln.54-59). Like Musgrave, Borza is limited to data ***protection*** and does not disclose authenticating a sensor or any other type of electronic device.

The cited references, whether alone or in combination, do not teach or suggest ***authenticating a sensor*** using an encrypted signature, as recited by claim 1. Applicant respectfully requests that the Examiner cite where in the cited references there is any mention of authenticating a sensor or any other type of electronic device.

The Examiner has asserted that the combination of the cited references teaches encrypting signed data. However, even if this assertion is true, the cited references still do not teach or suggest using an encrypted signature to authenticate a sensor, as required by claim 1.

Applicant respectfully submits that dependent claims 2 and 7 are patentable at least by reason of their dependency.

Claims 4-6, 8, 10-13, 17, and 20

Claims 4-6, 8, 10-13, 17, and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gilchrist in view of Musgrave and in further view of Borza as applied to claims 1, 2, 7, and 9 above, in view of Dulude and further in view of Gullman. Applicant respectfully disagrees.

Independent claim 11 includes a feature neither taught nor suggested by the prior art, namely: "a security module to decrypt the signed data and to use the signature corresponding to the imaging device to ***authenticate the imaging device*** by determining whether the imaging device is an authorized imaging device."

Independent claim 17 includes features neither taught nor suggested by the prior art, namely: "authenticating the imaging device at the server."

Dulude discloses encrypting transaction data and a user's sample biometric data with the user's private key and transmitting the encrypted data from a sending device to a receiving device. At the receiving device, the encrypted data may be decrypted and the user's identity may be authenticated using the user's pre-stored biometric data (Dulude, Summary of the Invention).

Gullman discloses the use of a biometric token for authorizing access to a host system. The token includes a comparison between a biometric input from a user and a template (Gullman, Summary of the Invention).

The cited references, whether alone or in combination, do not teach or suggest ***authenticating a sensor*** using an encrypted signature, as recited by claims 11 and 17.

Applicant respectfully submits that dependent claims 4-6, 8, 10, and 13 are patentable at least by reason of their dependency.

Claims 14-16, 18, and 19

Claims 14-16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gilchrist in view of Musgrave and in further view of Borza in view of Dulude and further in view of Gullman as applied to claims 4-6, 8, 10-13, 17, and 20 above and further in view of Turnbull. Applicant respectfully disagrees.

Independent claim 14 includes a feature neither taught nor suggested by the prior art, namely: "using the imaging device private key to ***authenticate the imaging device*** by determining whether the imaging device is an authorized imaging device."

Turnbull discloses that a receiving party may authenticate a public key of a sending party by using the sending party's signature public key certificate obtained from a certification authority (Turnbull, Col. 1, line 64 - Col. 2, line 2).

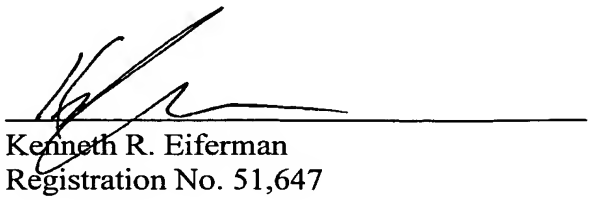
The cited references, whether alone or in combination, do not teach or suggest ***authenticating a sensor*** using an encrypted signature, as recited by claims 11 and 17.

Applicant respectfully submits that dependent claims 15, 16, 18, and 19 are patentable at least by reason of their dependency. Accordingly, reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections are respectfully requested.

CONCLUSION

In view of the above remarks, Applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested.

Date: November 24, 2004



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